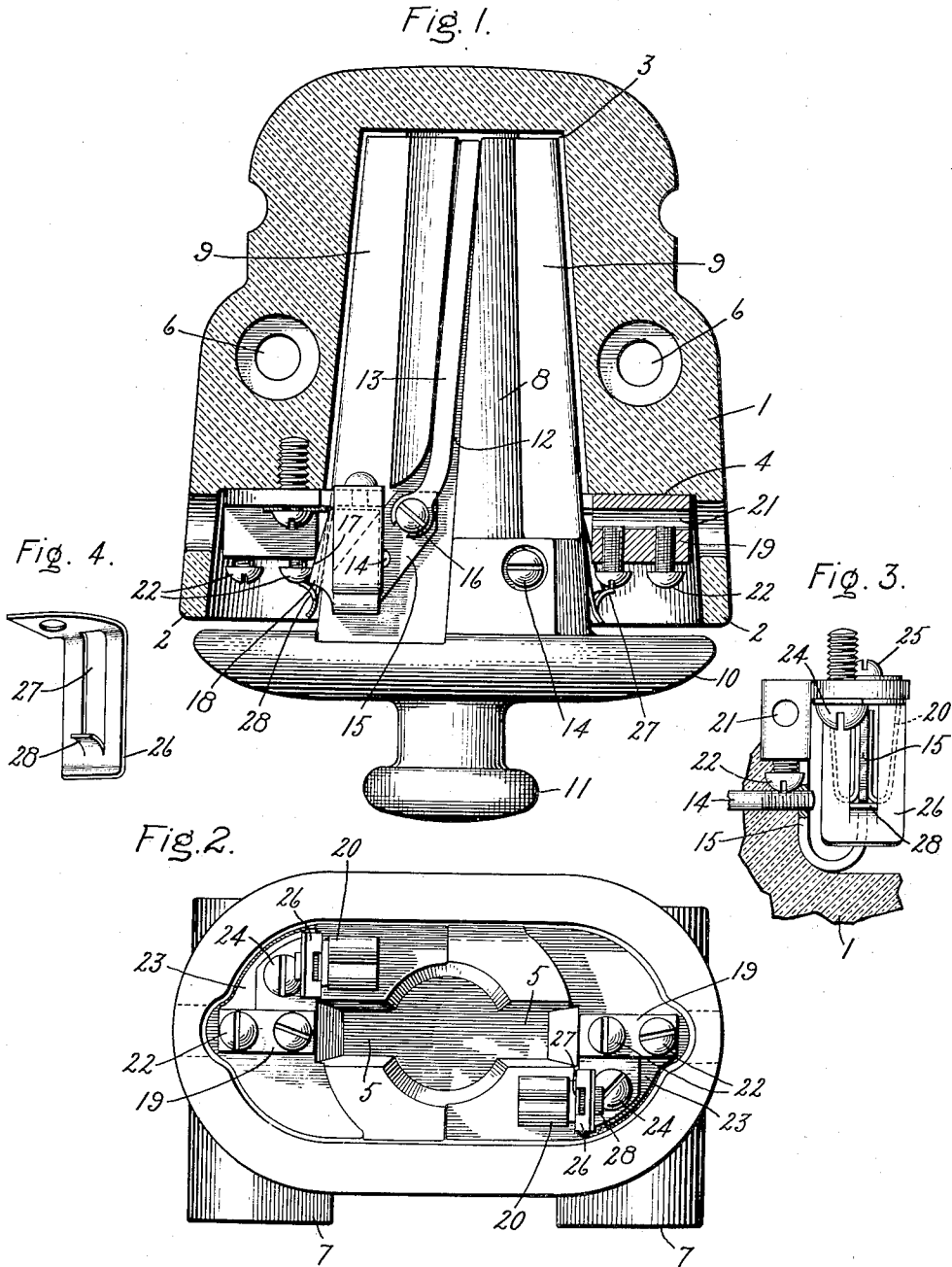


H. R. SARGENT.
ELECTRIC CUT-OUT.
APPLICATION FILED AUG. 21, 1911.

1,014,854.

Patented Jan. 16, 1912.



Witnesses:
J. Ellis Glen
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His Attorney.

UNITED STATES PATENT OFFICE.

HOWARD R. SARGENT, OF SCHENECTADY, NEW YORK, ASSIGNOR TO GENERAL ELECTRIC COMPANY, A CORPORATION OF NEW YORK.

ELECTRIC CUT-OUT.

1,014,854.

Specification of Letters Patent.

Patented Jan. 16, 1912.

Application filed August 21, 1911. Serial No. 645,180.

To all whom it may concern:

Be it known that I, HOWARD R. SARGENT, a citizen of the United States, residing at Schenectady, county of Schenectady, State of New York, have invented certain new and useful Improvements in Electric Cut-Outs, of which the following is a specification.

The present invention relates to protective devices for electric circuits of high potential, and more especially to thermal cut-outs for primary circuits of transformers such as are used on lighting circuits to step down the potential from two or three thousand volts to 250 volts.

The object of the invention is to provide an improved cut-out which shall permit the plug to be inserted without straining or injuring of the contacts and when inserted be securely held against accidental displacement.

One form of the invention is shown in the accompanying drawing forming a part of this specification, in which—

Figure 1 is a vertical section of the box with the plug shown in elevation and in operative position; Fig. 2 is an underside plan view of the box; Fig. 3 is a detached view of a pair of contacts and latching means; and Fig. 4 is a perspective view of the latch.

The fuse box 1 is made of porcelain somewhat in the form of an ordinary pin insulator and of substantially elliptical cross section with a skirt 2 extending around its lower edge and with a deep recess or chamber 3 extending from the bottom to near the top and a horizontal ledge 4 between the inner surface of a skirt and recess. Extending from diametrically opposite sides of the recess or chamber 3 are parallel-sided channels 5, and transversely of the box are two screw holes 6 having bossed projections 7 surrounding them and serving as feet for the cut-out. The plug 8 is also made of insulating material and adapted to substantially fill the recess or chamber 3 and has integral side wings 9 disposed on opposite sides thereof and adapted to enter the channels 5 of the box with slight clearances, as shown in Fig. 1. The plug is provided with a large flange 10 at its lower end with its periphery corresponding with the contour of the skirt 2 so as to cover the opening into the box and has a handle 11 located centrally thereof. Extending up both sides of

the plug portion 8 and across the top is a groove 12 for the reception of a fusible element 13. The lower ends of the grooves 12 spread out and merge with the surfaces of the side wings 9 on which are secured by screws 14 reversely-bent or U-shaped contact blades 15 having binding screws 16 for engaging the ends of the fusible element 13. The outer edges 17 of the contact blades are made cam-shaped with their lower extremities cut abruptly to form shoulders 18.

On the ledge 4 of the box and at opposite ends thereof are secured binding posts 19 with contact clips 20. The binding posts consist of rectangular bars having longitudinal apertures 21 extending therethrough for the reception of the conductor wires, and extending into the aperture from the lower side of each bar are two screws 22 which operate to bind the wire to the post. Extending from one side of each binding post is a foot 23 through which a screw 24 extends and enters a leaded aperture in the box 1 to secure the binding post in position. One end of each foot 23 is extended inwardly and to one side of a channel 5 for the reception of a phosphor-bronze contact clip 20 made U shape and having its free ends folded inwardly so as to frictionally receive a contact blade 15 between them. The contact clips 20 surround the extensions of feet 23 and are secured thereto by screws 25.

The means for latching the plug in fixed relation with the box, as shown in the drawing, consists of a pair of phosphor-bronze clips 26 secured to the feet 23 of the binding posts by the screws 24. The free ends of the latches are transversely disposed at the outer edges of the contact clips 20 and have formed therein longitudinal slits 27 of a width several times the thickness of the contact blades 15 and with tongues 28 at the lower ends formed by punching and bending outwardly a portion of the metal. These tongues are so positioned as to normally underlie the shoulders 18 of the contact blades 15 and curved in such a way as to enable the blades to force the free end of the latches outwardly when a substantial force is exerted on the handle 11 of the plug. By making the slots 27 and the tongue 28 substantially wider than the thickness of the contact blades 15, a certain freedom of lateral movement is provided for the plug without interfering with the operation

of the latch, for while the plug is designed to move in a straight line in and out of the receptacle, it is practically impossible to construct plugs of uniform and exact shape, due to the shrinkage characteristics of porcelain. It will be observed that the latching means above described operate upon the plug frictionally, and in no way necessitates any special manipulation either in inserting or moving the plug.

I do not desire to restrict myself to the particular form or arrangement of parts shown and described, since it is apparent that they may be changed and modified without departing from my invention.

What I claim as new and desire to secure by Letters Patent of the United States, is,—

1. The combination with a stationary contact clip, of a movable contact blade adapted to engage said clip and provided with a cam surface and a shoulder, and a spring latch having a curved tongue for engagement with said contact blade.

2. The combination of a binding post, a contact clip secured thereto, a spring latch fixed to said post transversely to said clip,

and a movable contact blade provided with a cam surface and a shoulder for engagement with said latch.

3. The combination of a binding post, a contact clip secured thereto, and a sheet metal latch secured to said post transversely to said clip and provided with a slot and a bent tongue at one end of said slot.

4. The combination with a box having a recessed chamber therein, two binding posts secured to one end of said box and having contact clips offset therefrom, sheet metal latches disposed transversely to the outer ends of said clips, and a winged plug adapted to enter the recess of the box and provided with U-shaped contact blades having their outer ends provided with cam surfaces and shoulders for engagement with said latches.

In witness whereof, I have hereunto set my hand this 19th day of August, 1911.

HOWARD R. SARGENT.

Witnesses:

BENJAMIN B. HULL,
HELEN ORFORD.